

DIGITAL TRANSFORMATION AND AI IN INSURANCE

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EIOPA'S PAST WORK ON AI

MAIN ACTIVITIES IN RECENT YEARS

2019

- EIOPA thematic review on Big Data Analytics in motor and health insurance ([link](#))

2020

- Discussion Note on the Supervision of Machine Learning algorithms (internal)

2021

- AI governance principles report developed by EIOPA's Stakeholder Group on Digital Ethics ([link](#))

2022

- Supervisory Statement on differential pricing practices ([link](#))

2023

- Digitalisation Market Monitoring survey – Report published in May 2024 ([link](#))

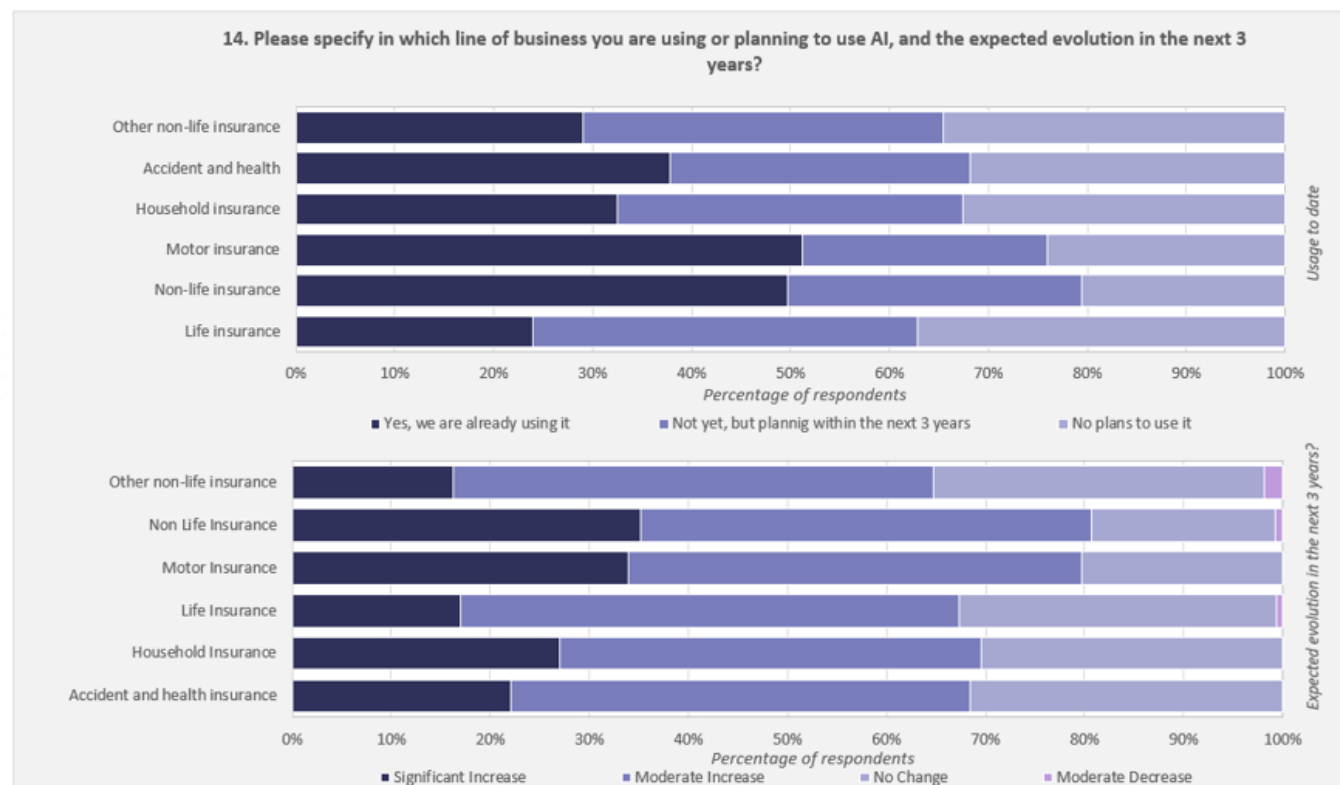
2024

- AI Act work and AI Opinion – Published in February 2025 ([link](#))

MARKET MONITORING

CURRENT AND EXPECTED USE OF AI

- AI is used by 50% of non-life insurers and by 24% of life insurers
- The use of AI is **expected to increase significantly** in all lines of business in the next 3 years.
- The survey was launched shortly after the release of Generative AI models such as **ChatGPT**
- AI is most often used with **human oversight**: the AI model advises or supports human who makes decision - model suggests answer.



MARKET MONITORING

AI USE CASES IN INSURANCE

- **Pricing, claims management and sales and distribution** are the areas of the insurance value chain where there are a greater number of AI use cases.
- Most insurance undertakings using AI do it on **selected areas of the insurance value chain**, while some of them are using it throughout the complete value chain
- **Chatbots** is the most popular AI use case
- **66% of the reported use cases are developed in-house**, and the remaining 34% are outsourced from 3rd party service provider

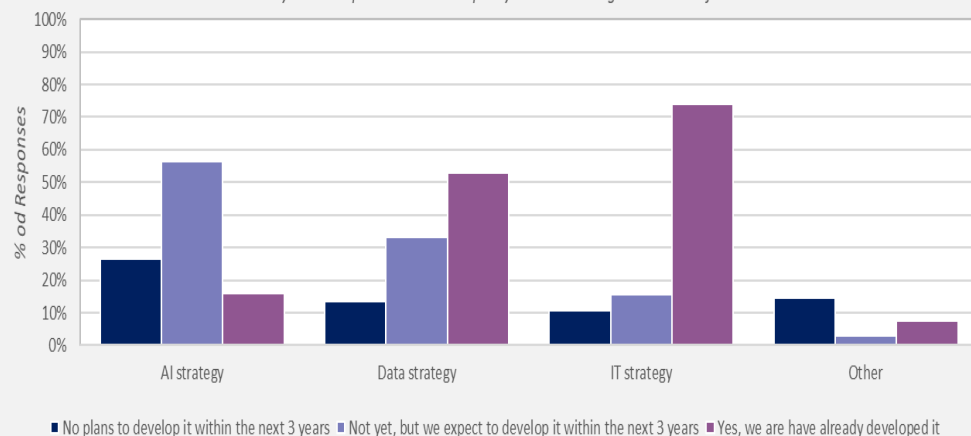


MARKET MONITORING

AI GOVERNANCE

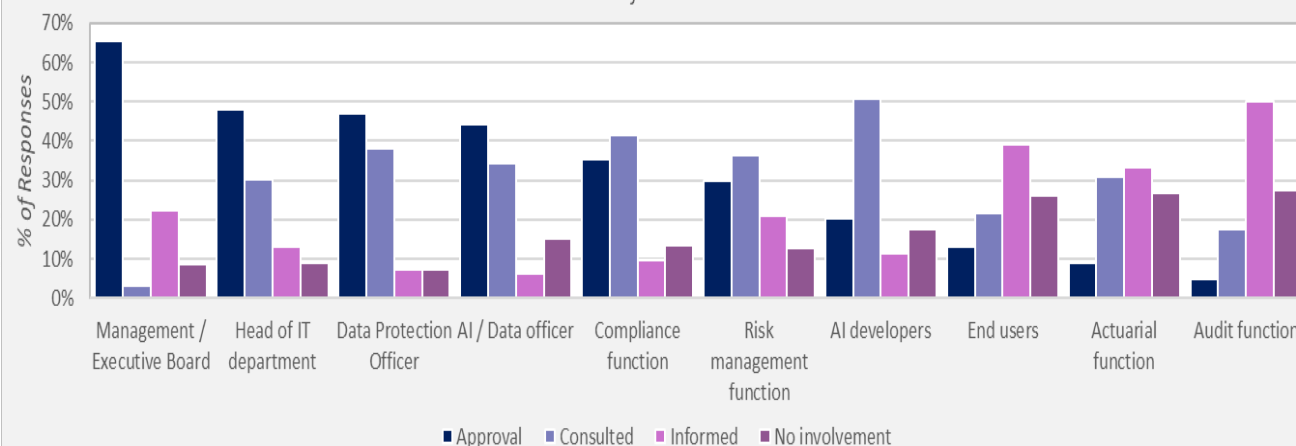
17. Please indicate whether you have developed or you are planning to develop an AI strategy / Data Strategy / IT strategy or other relevant policy document within your organisation to guide the use of AI systems in your organisation?

Have you developed these internal policy documents to guide the use of AI?



20. Concerning the usage of high-impact AI applications in your organisation, please indicate the level of involvement/responsibility of your Management / Executive Board and, where applicable, other staff members

Level of involvement

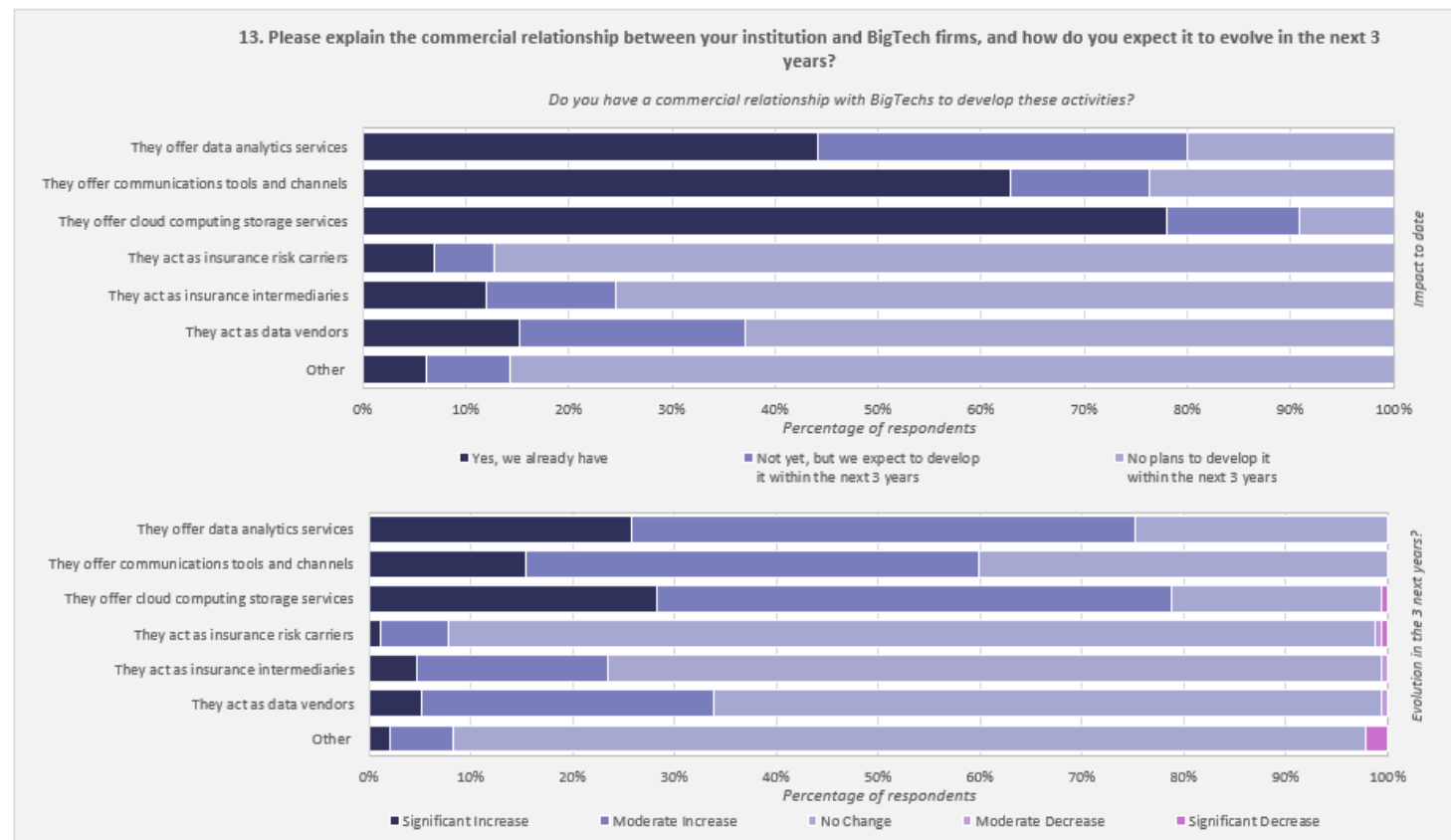


- Majority of respondents show **Data Strategy** and **IT Strategy** in place, while AI strategy lags behind
- The **involvement of different staff** depends on the AI use cases and the organisational structure of the insurer
- Management / Executive Board** mostly responsible for approval of high-impact AI use cases

MARKET MONITORING

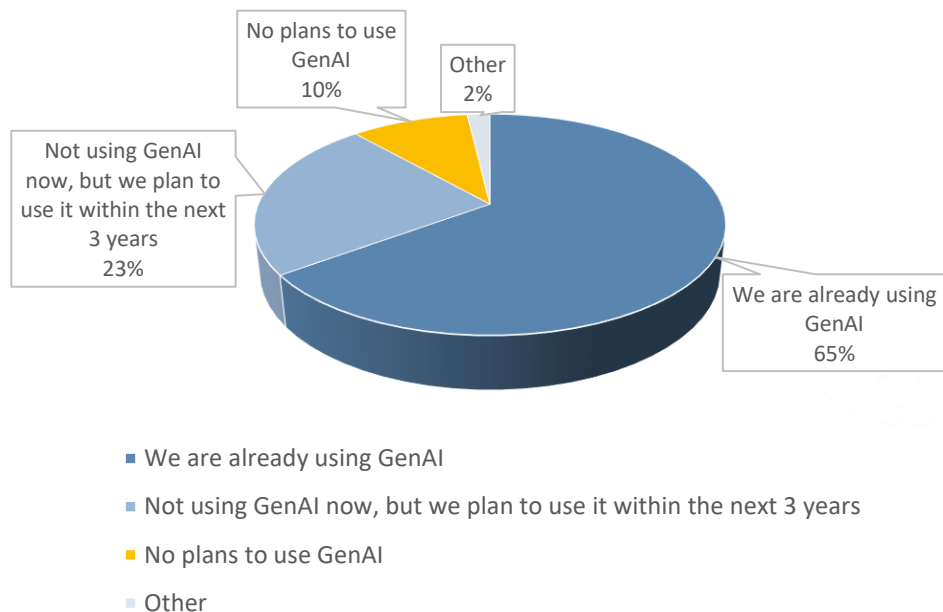
THIRD-PARTY SERVICE PROVIDERS

- **Almost 80% of insurers outsource cloud computing services from BigTechs**
- Outsourcing of cloud computing and data analytics (e.g. AI) expected to significantly increase in the next 3 years
- **Some BigTechs are licensed insurance distributors** (e.g., via large online retail platforms)
- Insurance undertakings have adopted **different strategies** regarding InsurTech start-ups

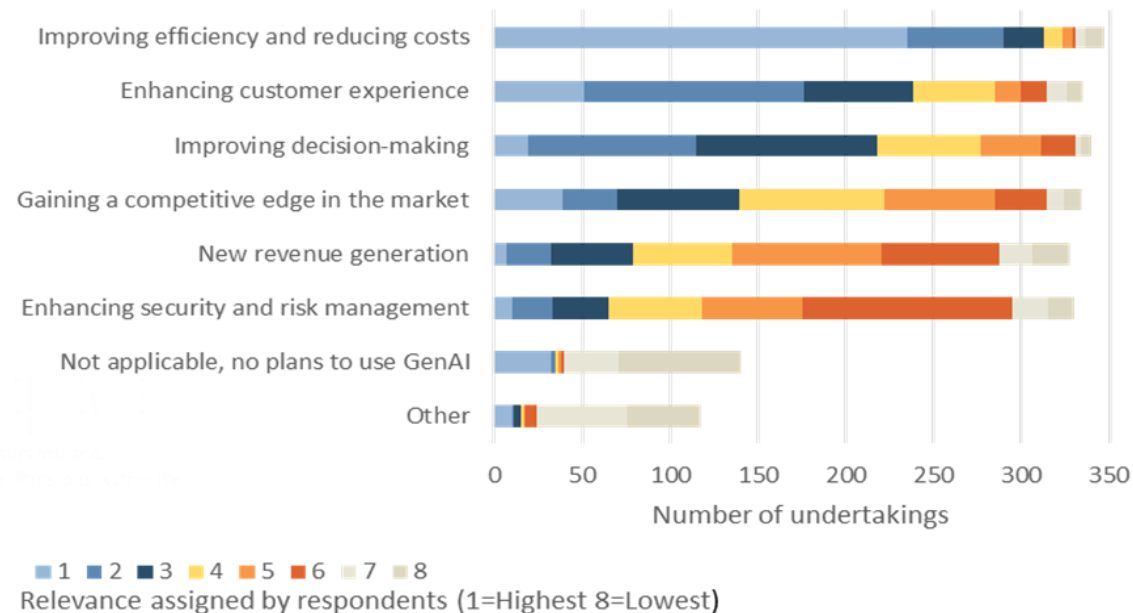


GENERATIVE AI ADOPTION AND IMPLEMENTATION STRATEGIES

Generative AI Adoption Status



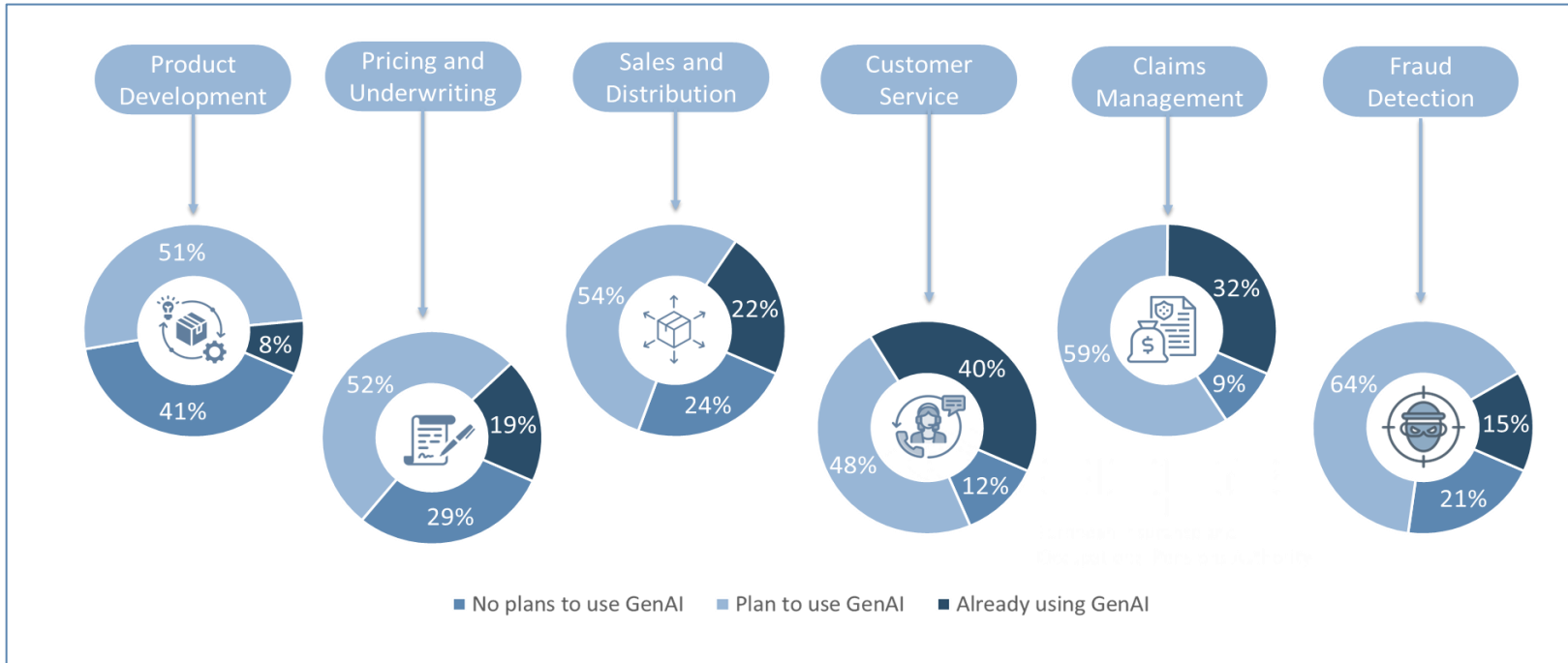
Main Drivers for Gen AI Adoption



Key takeaways:

- Gen AI adoption has already started, **almost 65%** of insurance undertakings are already actively using Gen AI today, and a further **23%** are planning to implement it within the next three years.
- **Improving efficiency ,reducing costs and enhancing customer experience** are the main motives for adopting Generative AI systems

GEN AI USE CASES ACROSS THE INSURANCE VALUE CHAIN



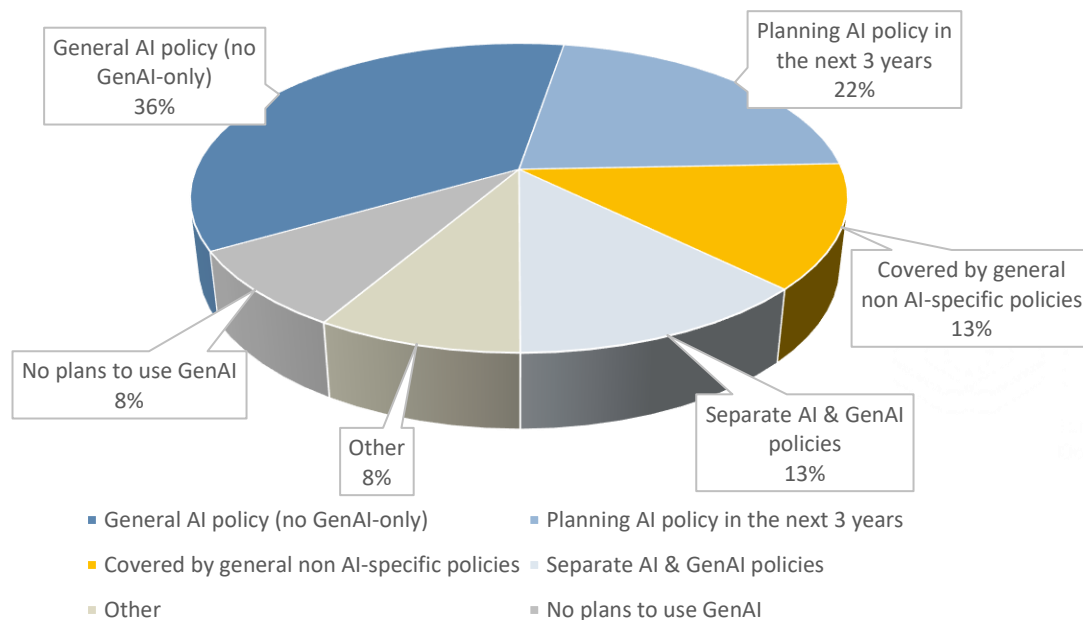
Key takeaways:

- Current Gen AI uses cases are focused on **Customer Service** and **Claims Management**, while top future interest is in areas like **Fraud Detection**.
- Most GenAI use cases remain in early development — **64% overall**, and for customer-facing ones, **75% are Prof of Concepts** while only **25% are implemented**.
- **Assisted Gen AI uses** cases dominates (>50%), but **Agentic AI** adoption is expected to grow from 2% → 16%, seen by many firms as transformative tech over the next 3–5 yrs.

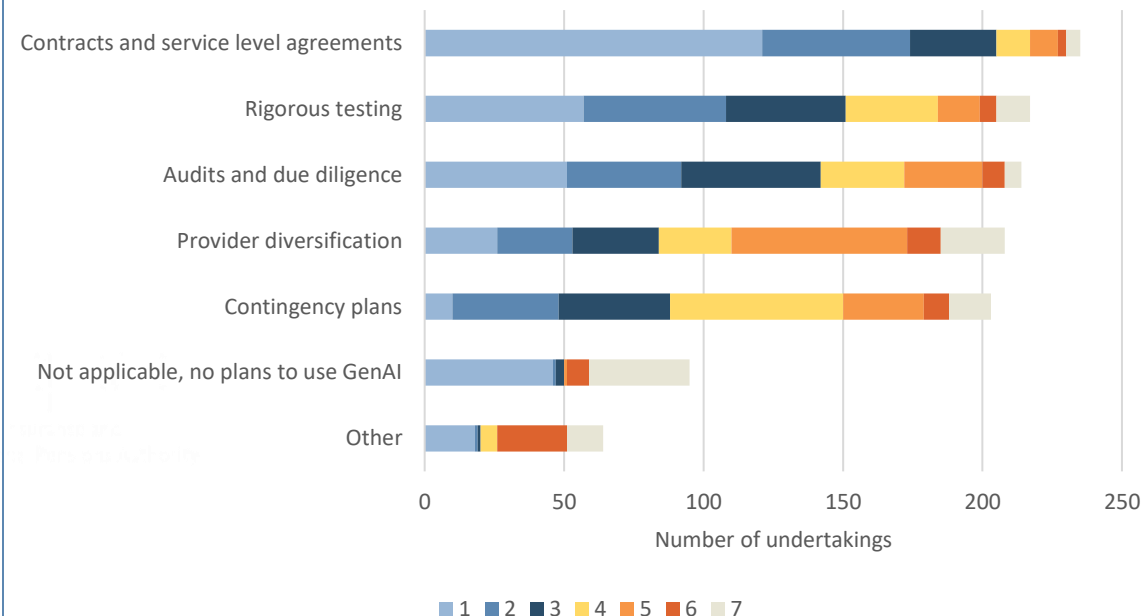
Identified Use Cases	Examples
Conversational AI	Customer Q&A,, contract updates.
Writing & Content Generation	Draft emails, marketing content.
Data Extraction	Invoices, reports, voice insights.
Text Summarization	Medical reports, contracts.
Knowledge Management (RAG)	Employee search tools, underwriting LLMs.
Code Assistants	Coding help, test scripts.
Process Automation	Invoice processing, email routing.
Translation	Policies, FAQs.
Scenario Modeling	Risk and pricing analysis.

GOVERNANCE AND RISK MANAGEMENT OF GEN AI SYSTEMS

AI and Generative AI Policy Landscape



Managing Generative AI Provider Risks

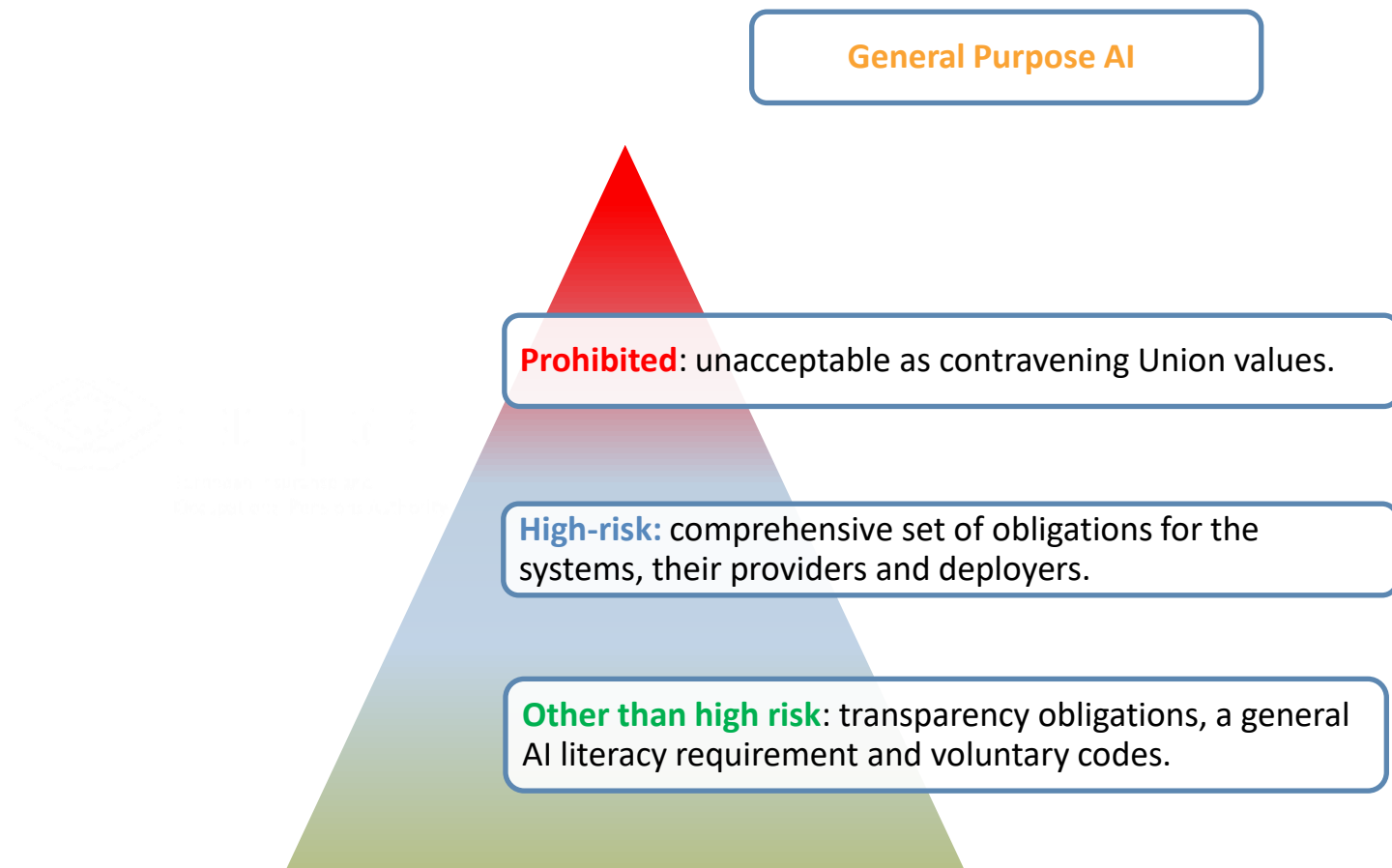


Key takeaways:

- A significant **governance gap** exists, as only **13%** of undertakings have a dedicated policy for Generative AI. The largest group (**36%**) relies on general AI policies that may not address the unique risks of this new technology.
- When managing risks from third-party providers, undertakings overwhelmingly rely on traditional methods. **Contracts and Service Level Agreements** are the most widely used risk management tool, followed by **rigorous testing** and **audits**.

AI ACT OVERVIEW

- **Objectives:** Promote the uptake of AI while ensuring a high level of protection of health, safety, fundamental rights (...) and to support innovation.
- **Horizontal:** applies to all applications of AI across all sectors and applications.
- **Risk based approach:** The higher the risk, the stricter the rules.
- **Shared responsibility:** Rights and obligations to different stakeholders in the AI value chain (e.g. providers, deployers).



AI ACT

HIGH RISK AI SYSTEMS - INSURANCE USE CASE

- Most of the requirements of the AI Act apply to AI systems identified as high-risk.
- **High risk use cases in the insurance sector:**

AI systems intended to be used for **risk assessment and pricing in relation to natural persons in the case of life and health insurance.**

- AI systems for the purpose of **detecting fraud in the offering of financial services and for prudential purposes** to calculate credit institutions' and insurances undertakings' capital requirements should **not be considered as high-risk.**
- **Implementation work:** COM Guidelines to be developed by the Commission (including a list of practical examples of high risk and non-high risk use cases of AI systems)

AI ACT

GOVERNANCE AND RISK-MANAGEMENT FOR HIGH-RISK AI SYSTEMS

□ Governance and risk-management requirements for high-risk AI systems

Establish and implement risk management systems

Use high-quality **training, validation and testing data** (relevant, representative etc.)

Establish **documentation** and **record-keeping** logging features (traceability & auditability)

Ensure appropriate certain degree of **transparency** and provide users with **information** (on how to use the system)

Ensure **human oversight** (measures built into the system and/or to be implemented by users)

Ensure **robustness, accuracy** and **cybersecurity**

□ Providers of high-risk AI systems

- Ensure that AI systems comply with the obligations outlined above.
- Registration in the EU database, quality management system (including post-market monitoring), maintaining documentation, and ensuring that systems undergo a conformity assessment and affix the CE marking.
- Limited derogations (risk management, quality management, documentation keeping, post market monitoring).
- Implementation work: Guidelines to be developed by the Commission and harmonised standards (CEN-CENELEC).

HIGH-RISK AI SYSTEMS: DEPLOYERS

▪ Deployers

- Use high-risk AI systems in accordance with the instructions
 - Assign human oversight and inform the provider or distributor, or the MSA and suspend the use of the system in case they identify any serious incident or malfunctioning.
 - Ensure that input data is relevant in view of the intended purpose of the high-risk AI system and keep the logs
 - Prior to the first use conduct a fundamental rights impact assessment
 - **Derogations** for financial institutions to internal governance frameworks: monitoring obligation; obligation to keep the logs.
- ❑ **Implementation work:** The AI Office shall develop a template for a questionnaire, including through an automated tool, to facilitate deployers to implement the impact assessment obligation.

AI ACT

HIGH-RISK AND OTHER THAN HIGH-RISK

□ Transparency:

- AI systems which directly interact with individuals: inform individuals that they are interacting with an AI system.
- AI systems generating synthetic content: mark outputs as artificially generated.
- Specific transparency requirements for deployers of emotion recognition or biometric categorization systems and for AI systems of deep fake content.
- Information must be provided clearly and distinctly to individuals at the latest at the time of their first interaction or exposure.
- *Implementation work*: The Commission shall develop guidelines.

AI ACT

REMEDIES (INDIVIDUALS' RIGHTS)

- ❑ Any natural or legal person has the **right to... lodge a complaint** with a NCA or the AI Office (Article 85).
- ❑ Any affected person subject to a decision based on the output from a high-risk AI system and which produces legal effects or similarly significantly affects him or her in a way that they consider to adversely impact their health, safety and fundamental rights... **right to request from the deployer clear and meaningful explanations** on the role of the AI system in the decision-making procedure and the main elements of the decision taken (Article 86).

AI ACT

GENERAL PURPOSE AI MODELS

- **GPAI model:** AI model that displays significant generality and is capable to competently perform a wide range of distinct tasks and that can be integrated into a variety of downstream systems or applications.
- **Obligations for providers of GPAI and GPAI with systemic risk**
 - Transparency obligations, including drawing up technical documentation.
 - Closely cooperate with the providers of the high-risk AI systems that integrate the GPAI model.
 - Make publicly available information of the content used for training the GPAI model
 - Cooperate with the Commission and NCAs
 - Codes of Practice to demonstrate compliance with the obligations.
 - Additional requirements for GPAI with systemic risk
 - Some exceptions apply for GPAI models under free open license. **Implementation work:** The AI Office shall develop a template for a questionnaire, including through an automated tool, to facilitate deployers to implement the impact assessment obligation.
- **Implementation work:** The **AI Office** is responsible for the monitoring the implementation and application of rules on GPAI models

AI OPINION

INTERPLAY BETWEEN THE AI ACT AND INSURANCE LEGISLATION

	AI ACT	INSURANCE LEGISLATION
OBJECTIVES	➤ protection of fundamental rights, health, and safety	➤ consumer protection, solvency, and financial stability
GOVERNANCE	➤ The AI Act introduces a comprehensive governance and risk management framework for providers of high-risk AI systems. Insurance undertakings as providers or deployers of high-risk AI systems already have to comply with a comprehensive system of governance requirements. ➤ To address potential overlaps the AI Act introduces limited derogations applicable to undertakings subject to Solvency II, e.g. risk management system, post-market monitoring system.	
SCOPE	➤ AI systems, providers and users ➤ requirements primarily focused on high-risk use cases	➤ activities of direct insurance and reinsurance ➤ activities of insurance and reinsurance distribution
OUTSOURCING	➤ Using third-party AI systems could be considered outsourcing under Solvency II. The AI Act establishes different obligations and responsibilities for the different actors of the AI value chain (e.g. providers, deployers, importers etc.). However, insurance undertakings remain fully responsible for all their obligations under Solvency II when they outsource functions or any insurance activities.	

AI OPINION

SCOPE AND OBJECTIVE

- The Opinion provides guidance on the principles and requirements in insurance sector legislation that should be considered in relation **the use of AI systems in insurance** that are not prohibited AI practices or considered as high-risk AI systems under the AI Act
- The Opinion is based on the **definition of AI systems** of the AI Act
- The **objective is twofold**:
 - promote supervisory convergence amongst NCAs to ensure a responsible use of AI systems in insurance
 - provide clarity on the supervisory expectations on the interpretation of provisions of insurance legislation in the context of AI systems, including to reflect risk-based and proportionality considerations

AI OPINION

RISK BASED APPROACH AND PROPORTIONALITY

Key legal provisions

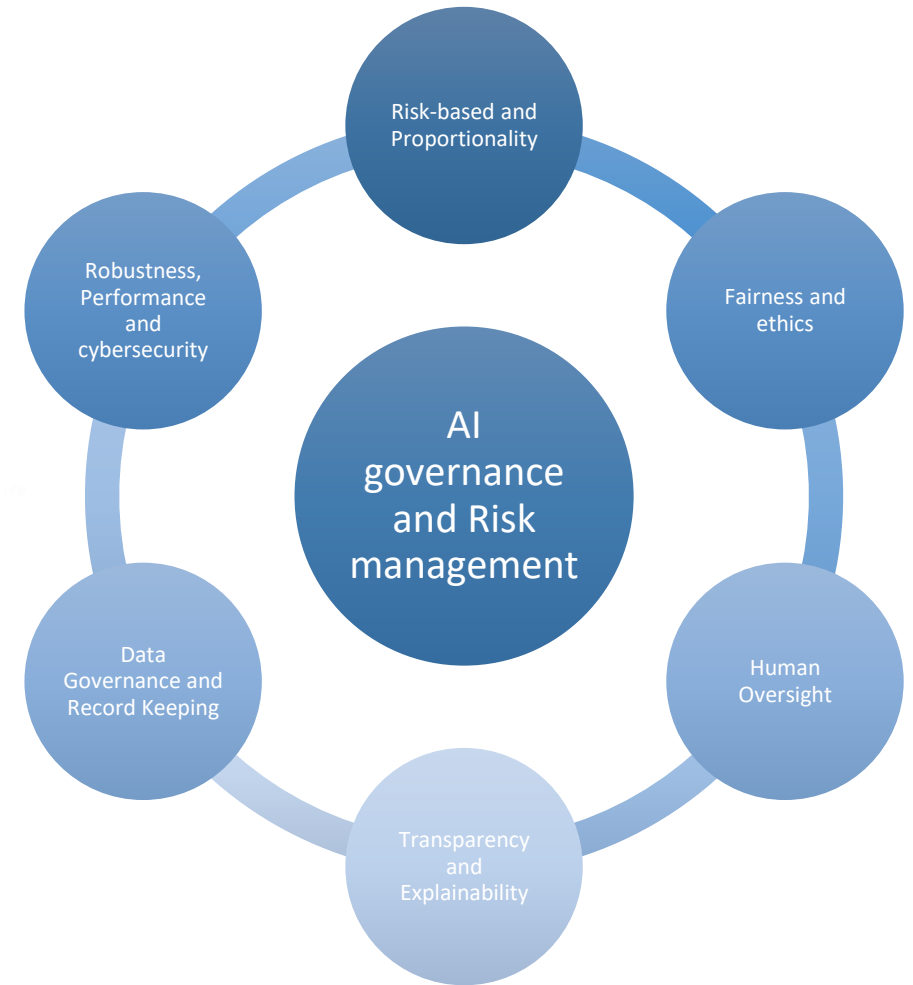
- Article 41 Solvency II Directive: insurance undertakings need to have in place an effective system of governance which provides for a sound and prudent management of the business, which shall be proportionate to the nature, scale, and complexity of the operations
- Article 25 Insurance Distribution Directive (IDD): requires undertakings to maintain, operate and review a process for the approval of insurance products which shall be proportionate and appropriate to the nature of the insurance product

Key elements

- Undertakings should assess the risk of the different AI use cases
- Develop proportionate measures, tailored to the specific AI use cases, that ensures the responsible use of AI

AI OPINION RISK MANAGEMENT SYSTEM

- The Opinion follows a **principles-based approach**, and it is in line with the underlying principles of the AI Act and other international initiatives in this area
- Undertakings should assess their risk and develop governance and risk management measures adequate and **proportionate to the characteristics of the use cases at hand**
- Holistic approach to AI governance: a responsible use of AI is achieved by a **combination of measures** and not by a single / stand-alone one.



EIOPA'S UPCOMING WORK ON AI

ACTIVITIES IN 2025/6

An **AI project group** has been created in EIOPA's new Digital Finance Steering Committee, with 3 workstreams:

AI Act workstream

- Continue to assess the impact on the insurance sector and develop a common approach.
- Participate in the AI Board's Finance working group

AI Guidance workstream

- Finalise the AI Opinion and subsequently develop further guidance on specific use cases or issues

AI Supervision workstream

- Develop and AI Chapter in the Supervisory Handbook

Market Monitoring:

- Generative AI market survey



THANK YOU!